

**Remarks:**

5 In the Office Action, claim 13 was rejected under 35 U.S.C. § 112, first paragraph,  
as allegedly failing to comply with the written description requirement. Claims 1-8 and 13  
were rejected under 35 U.S.C. § 102(b), as allegedly anticipated by the *Yau* patent, U.S.  
Patent No. 5,080,942. Claims 1-8 and 13 were also rejected under 35 U.S.C. § 103(a), as  
allegedly unpatentable over the *Yau* patent. Claim 11 was rejected under  
35 U.S.C. § 103(a), as allegedly unpatentable over the *Yau* patent in view of the *Patel*  
patent, U.S. Patent No. 4,654,402.

10 The above-described objections and rejections are addressed as follows:

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15 **A) DISCUSSION OF THE INVENTION**

Before specifically addressing this rejection, it will be helpful first to briefly  
summarize Applicant's invention. The invention resides in a rubber composition. This  
composition includes a rubber component, polybutene and white carbon (i.e., silica). This  
combination of components is characterized by a flexibility and durability that lends it to  
20 numerous uses wherein other rubber compositions would suffer higher levels of  
degradation than the rubber composition of the present invention. Among these uses is a  
use as pipe for carrying chlorinated water, such as in common use in water distribution  
systems.

25 **B) REJECTION UNDER 35 U.S.C. § 112**

Applicants have amended claims 13 in response to the rejection based on  
35 U.S.C. § 112. In particular, the claim has been amended to remove any reference to a  
30 combination of the recited elements. In light of this amendment, Applicant respectfully  
requests the Examiner withdraw the § 112 rejection of claim 13.

**C) REJECTION UNDER 102(b)**

i) The Cited Art Must Set Forth Every Element to Establish a *Prima Facie* Case of Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *See*, M.P.E.P. § 706.02, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

ii) The Cited Art Fails to Set Forth All the Claim Limitations

The present Office Action relies upon the arguments recited in the Office Action mailed June 13, 2002, which recites that *Yau* "discloses compositions comprising ... (e) silica (i.e., white carbon) ...." In the Amendment dated March 26, 2003, Applicant discussed both a § 102(b) and a § 103(a) rejection together, and asserted that *Yau* pertained to the use of carbon black, and not white carbon, and that the use of white carbon was not obvious over the use of carbon black. While the Examiner has not refuted the assertion that *Yau* pertained to the use of carbon black rather than white carbon, the subsequent Office Actions have nevertheless reiterated the rejection under § 102(b).

Independent claim 1 recites "[a] rubber composition consisting essentially of a rubber component, polybutene and white carbon." The cited art fails to set forth a composition including white carbon (i.e., silica).

iii) The Office Action Fails to Establish a *Prima Facie* Case of Obviousness

Because the cited art fails to set forth a composition comprising white carbon, as recited in claim 1 and incorporated in every dependent claim, the Office Action fails to establish a *prima facie* case of anticipation. Accordingly, the rejection of claims 1-8 and 13 under 37 U.S.C. § 102(b) is improper, and Applicant respectfully requests it be withdrawn.

**D) REJECTION UNDER 103(a)**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references, when combined, must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination must be found in the prior art and not based on an applicant's disclosure. (See, M.P.E.P. § 706.02(j)).

**1. THE CITED ART FAILS TO DISCLOSE THE CLAIM LIMITATIONS**

i) The Cited Art Must Teach or Suggest All the Claim Limitations to Establish a *Prima Facie* Case of Obviousness

As noted above, to establish a *prima facie* case of obviousness, the prior art references, when combined, must teach or suggest all the claim limitations. See, M.P.E.P. § 706.02(j).

ii) The Cited Art Fails to Teach or Suggest All the Claim Limitations

As discussed above with regard to anticipation, independent claim 1 recites “[a] rubber composition consisting essentially of a rubber component, polybutene and white carbon.” The cited art fails to set forth a composition including white carbon.

iii) The Office Action Fails to Establish a Prima Facie Case of Obviousness

Because the cited art fails to set forth a composition comprising white carbon, as recited in claim 1 and incorporated in every dependent claim, Applicants assert that the Office Action fails to establish a *prima facie* case of obviousness under § 103(a). Accordingly, the rejections of claims 1-8, 11 and 13 under 37 U.S.C. § 103(a) are improper, and Applicant respectfully requests they be withdrawn.

2. **THE OFFICE ACTION FAILS TO SPECIFICALLY ALLEGE  
OTHER CRITERIA FOR OBVIOUSNESS**

5 i) An Office Action Must Communicate the Basis for a Rejection

"It is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply." See, MPEP 706.02(j).

10 ii) The Office Action Failed to Identify the Type of Relationship on Which it Relied

The MPEP describes the analysis of inventions having various relationships to the prior art. For example, a discussion of what is required to establish a *prima facie* of obviousness for homologs, analogues and isomers is provided in MPEP § 2144.09. Likewise, a discussion of what is required to establish a *prima facie* case of obviousness in a genus-species chemical composition situation is provided in MPEP § 2144.08. Each of these discussions explicitly provides requirements that must be established for a *prima facie* case.

20 Applicant notes with appreciation that the Examiner suggested supportive data could be presented to show that the carbon black of *Yau* would affect the basic and novel characteristics of the claimed invention. See, Office Action dated December 26, 2002, section 8. However, the various Office Actions fail to allege any relationship on which to base this requirement. More particularly, the Office Actions fail to assert any relationship between the claimed invention and the cited art (e.g., genus-species) to establish a *prima facie* case of obviousness.

30 iii) A Non-final Office Action Should Clarify the Type of Relationship on Which it Relies

35 Before any final action is given, Applicant respectfully requests that the claim rejections be made with particularity. More particularly, Applicants request an explicit identification of the asserted relationship serving as a basis for the claim rejections.

3. **THE USE OF WHITE CARBON PROVIDES UNEXPECTEDLY  
ADVANTAGEOUS AND SUPERIOR PROPERTIES OVER THE  
USE OF CARBON BLACK**

5 i) Obviousness Based on Structural Similarity Is Rebuttable

As mentioned above, Applicant appreciates the Examiner suggestion that  
supportive data could be presented to show that the carbon black of *Yau* would affect the  
basic and novel characteristics of the claimed invention. *See*, Office Action dated  
10 December 26, 2002, section 8. Applicant notes that, where a *prima facie* case of  
obviousness based on structural similarity has been established, that case is rebuttable by  
proof that the claimed compounds possess unexpectedly advantageous or superior  
properties. *See*, M.P.E.P. § 2144.09.

15 ii) The Claimed Compounds Possess Unexpectedly Advantageous and  
Superior Properties

The patent to *Yau* discloses a rubber composition that includes carbon black, *see*,  
e.g., column 7, line 15; column 9, line 21; and column 9, line 68. Many preferred uses for  
20 the present invention provide exposure to substances such as chlorine at levels that will  
degrade rubber compositions. When a rubber composition including carbon black is  
exposed to chlorinated water, the carbon black will typically adsorb the chlorine, which  
will then react with the rubber component in the rubber composition, thereby degrading  
the rubber composition.

25 Appended to this Amendment is a declaration of the Applicant, which is entitled  
DECLARATION OF KANEYOSHI HAYASHI UNDER 37 C.F.R. §1.132. The  
declaration reports experimental results as proof that the claimed invention possess  
unexpectedly advantageous and superior properties, and thus that using the carbon black of  
30 *Yau* would affect the basic and novel characteristics of the claimed invention. More  
particularly, the data identifies unique properties in having a resistance to chlorine.  
Compared with a rubber composition containing carbon black, a rubber composition under  
the present invention, being free of carbon black, has a prolonged service life and  
durability.

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iii) The Office Action Fails to Establish a Prima Facie Case of Obviousness

Because the appended declaration establishes unexpectedly advantageous and superior properties over the cited art, any *prima facie* case of obviousness that might have been established has been rebut. Accordingly, the rejections of claims 1-8, 11 and 13 under 37 U.S.C. § 103(a) are now improper, and Applicant respectfully requests they be withdrawn.


**E) CONDITIONAL REQUEST FOR INTERVIEW**

In light of Applicant's amendments, arguments and experimental results, Applicant believes that the claims are in condition for allowance. Nevertheless, if the Examiner believes that claims of the application should be finally rejected, or if the Examiner has issues that merit discussion, then Applicants request a telephonic interview to try and efficiently resolve all open issues.

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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